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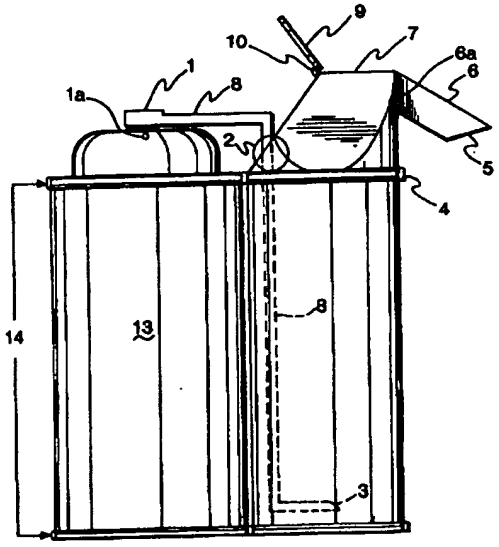
(54) Apparatus for heating and moisturising shaving cream.

(57) There is disclosed an apparatus for heating and moisturising shaving cream dispensed from a valve (1a) adjacent the top of a pressurised container (13) and comprising a fluid vessel (11) for holding a hot fluid e.g. hot water having a specific gravity greater than that of the shaving cream to be dispensed and having a vertical dimension approximating the vertical dimension of the pressurised container (13), with the vessel (11) being disposed laterally adjacent and vertically coextensive with the pressurised container (13); and a conduit (8) for depositing shaving cream dispensed from the valve (1a) into the hot fluid within the fluid vessel (11) near the bottom of the vessel (11), so that the shaving cream can move upwardly through the hot fluid via its own buoyancy so as to be heated and moisturised, and then made available for use via a discharge spout (5).

Fig. 1



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This invention relates to apparatus for heating and moisturising shaving cream dispensed from a valve adjacent the top of a pressurised container of shaving cream.

It is known to provide shaving cream in pressurised containers, but there are a number of performance faults associated with current shaving products, in the form of foams and gels. Although these shaving products provide lubrication and prevent drying, they do not contribute heat and extra moisture to the shaving area. When these products are released from their pressurised containers, the release of pressure and expansion of the product causes cooling. In addition, it is not economical, in the case of foam, or feasible, in the case of gel, to include enough water in the pressurised product container to provide a generous level of actual moisture.

The apparatus of the invention seeks to overcome this problem by providing supplemental conditioning of shaving cream dispensed from a pressurised container, by way of heating and moisturising of the products prior to use.

Accordingly, the invention provides apparatus for heating and moisturising shaving cream dispensed from a valve adjacent to the top of a pressurised container, comprising:

(a) a fluid vessel for holding a hot fluid having a specific gravity greater than that of the shaving cream to be dispensed, said vessel having a vertical dimension approximating a vertical dimension of the pressurised container, said vessel to be disposed in a position laterally adjacent, and vertically coextensive with, the pressurised container; and,

(b) conduit means for depositing shaving cream dispensed from the valve into said hot fluid within said fluid vessel near a lower extremity of said vessel, when said vessel is disposed laterally adjacent to pressurised container.

Preferably, the conduit means comprises a delivery tube extending from the valve adjacent the top of the pressurised container, through a wall of said vessel, and to a position adjacent a lower extremity of said vessel.

The delivery tube may comprise a duct extending only laterally and downwardly from the valve of the pressurised container, wherein the flow of shaving cream is facilitated.

Accordingly, in apparatus according to the invention, conditioning of a dispensed shaving cream can be achieved by directly contacting these products with a hot fluid e.g. hot water to produce hot, moist shaving products, which improve the shaving process compared to conventional methods of product use.

The apparatus of the invention therefore provides a product conditioning unit capable of causing a pressurised product, such as shaving foam or gel, to be conditioned by being heated and moisturised by direct contact with hot fluid. Further, the apparatus can be made to conform with i.e. to receive pressurised product containers in current or future use.

One embodiment of apparatus according to the invention will now be described in detail, by way of example only, with reference to the accompanying drawing, in which:

Figure 1 is a side view of apparatus for heating and moisturising shaving cream and adapted to receive a pressurised container of such shaving cream; and,

Figure 2 is an end view of the apparatus shown in Figure 1.

Referring now to the drawing, there will be described, by way of example only, an apparatus for heating and moisturising shaving cream dispensed from a valve adjacent to the top of a pressurised container of the shaving cream. The apparatus comprises a fluid vessel 11 for holding a hot fluid, usually hot water, having a specific gravity greater than that of the shaving cream to be dispensed, with the vessel 11 having a vertical dimension approximating a vertical dimension of a pressurised container 13 which the apparatus is adapted to mount therein. As can be seen in Figure 1, vessel 11 is disposed in a position laterally adjacent to, and vertically coextensive with the pressurised container 13.

Conduit means is provided for depositing shaving cream dispensed from the container 13, and comprises a delivery tube 8 which has a top arm extending substantially horizontally away from an inlet pressure connector 1 to a pressure valve 1a at the top of the pressure container 13, and then extends downwardly through a seal 2 and within vessel 11 towards the bottom thereof, and then is inturned to form a tube outlet 3 a small distance above the base of the vessel 11. Therefore, when vessel 11 is located laterally adjacent to the pressurised container 13, and upon depression of inlet pressure connector 1, shaving product is dispensed under pressure out of the pressurised container 13 along delivery tube 8 to emerge from outlet 3 near the bottom of the column of hot water within the vessel 11.

The apparatus of the invention may comprise a holder adapted to receive any design of pressurised container 13, and also incorporating vessel 11 to be located alongside pressurised container 13, and coupled therewith, as an integral structure. Alternatively, the apparatus of the invention may comprise an attachment incorporating vessel 11, delivery tube 8 and pressure connector 1, and which can be coupled with a pressurised container to form a unit therewith. Reference 14 indicates

one form of means for coupling together the pressurised container 13 to the vessel 14.

Returning now to description of the vessel 11, this will normally be filled with hot water up to level 4, which is just below a top closable portion of the vessel formed by a spout body 6 having a spout inlet 6a, and a spout outlet 5. A water inlet 7 allows the vessel 11 to be filled with hot water, and a cap / seal 9 having hinge 10 can close the water inlet 7.

As indicated above, delivery tube 8 enters the vessel 11 via a seal 2 at a location at which tube 8 enters, affixes to and seals to the vessel 11.

Reference 12 indicates generally the upper tapered accumulator above the water level 4 in which dispensed shaving products can collect after upward passage through the hot water in the vessel 11.

The operation of the apparatus consists initially of filling the vessel 11 with hot water through inlet 7 up to water level 4. The cap 9 is then closed to cover and seal the water inlet 7.

Next, following application of downward force on inlet pressure connector 1, pressure valve 1a releases product from the pressurised container 13. After the product passes through the pressure valve 1a, it enters inlet pressure connector 1 under pressure. This then directs flow of pressurised product into delivery tube 8 to which inlet pressure connector 1 is attached. Delivery tube 8 directs a flow of pressurised product to the lower interior region of the vessel 11 and issues from the delivery tube outlet 3. The delivery tube enters, affixes and seals itself to the vessel 11 at the delivery tube entry point formed by seal 2.

After issuing from delivery tube outlet 3, the product is released into the hot water contained in the vessel 11. Since the specific gravity of the hot water is greater than that of the shaving cream, the shaving cream rises through the column of hot water by its own buoyancy and, during this passage through the water, it acquires both heat and moisture by direct contact with the water. Upon rising above water level 4, hot and moist i.e. conditioned product is then accumulated within accumulator top 12 and is directed to spout inlet 6a by means of the tapered upper end shape of the accumulator 12. Conditioned product enters spout 6 at inlet 6a and then exists at spout outlet 5. Conditioned product is therefore now ready for use.

After use, water is dumped out of the vessel via the inlet 7, and the entire apparatus then can be rinsed out to store until next use.

Claims

1. Apparatus for heating and moisturising shaving cream dispensed from a valve adjacent to the top of a pressurised container, comprising:

   (a) a fluid vessel for holding a hot fluid having a specific gravity greater than that of the shaving cream to be dispensed, said vessel having a vertical dimension approximating a vertical dimension of the pressurised container, said vessel to be disposed in a position laterally adjacent, and vertically coextensive with, the pressurised container; and,

   (b) conduit means for depositing shaving cream dispensed from the valve into said hot fluid within said fluid vessel near a lower extremity of said vessel, when said vessel is disposed laterally adjacent to pressurised container.

2. Apparatus according to claim 1, wherein said conduit means comprises a delivery tube extending from the valve adjacent the top of the pressurised container, through a wall of said vessel, and to a position adjacent a lower extremity of said vessel.

3. Apparatus according to claim 2 wherein said delivery tube comprises a duct extending only laterally and downwardly from the valve of the pressurised container, wherein the flow of shaving cream is facilitated.

4. Apparatus according to any one of claims 1 to 3, wherein the vessel has a tapered top portion for accumulating shaving cream after upward passage through a column of hot fluid in the vessel.

5. Apparatus according to claim 4, wherein the top portion of the vessel has a discharge spout and is shaped so as to direct accumulated product towards an inlet of the spout.

Fig. 2

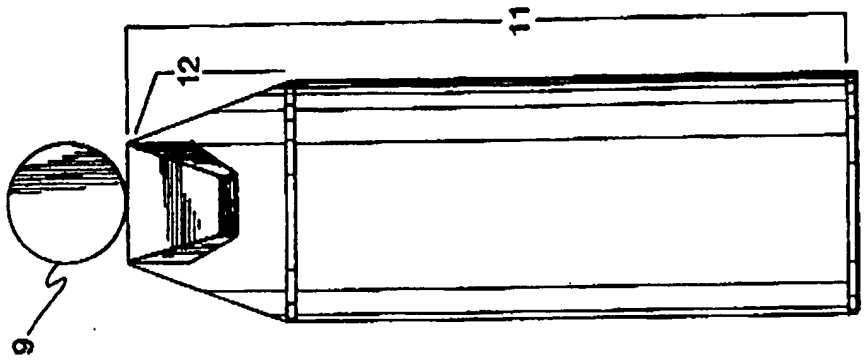
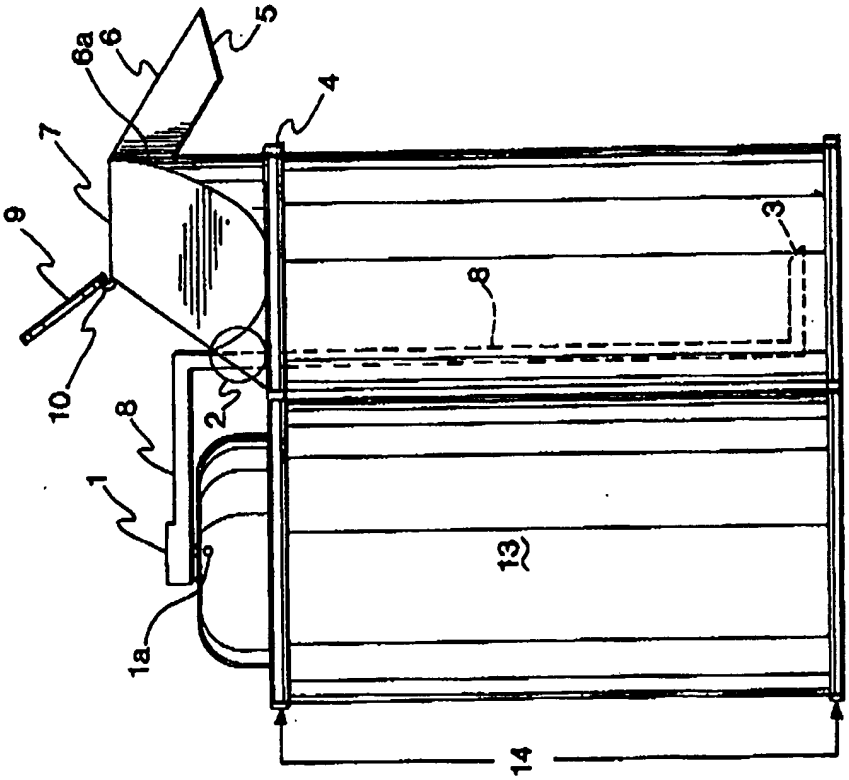


Fig. 1



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EUROPEAN SEARCH REPORT

Application Number

EP 91 30 9903

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
E	US-A-5 060 829 (EVANS) * the whole document *	1-5	B65D83/14 A45D27/00
Y	US-A-3 300 095 (MARAFFINO) * column 1, line 72 - column 2, line 41; figures 1-3 * * column 4, line 3 - line 20; figures 5-8 *	1-5	
Y	GB-A-1 095 887 (LERNER) * page 3, line 102 - page 4, line 92; figures 6-10 *	1-5	
A	US-A-3 338 477 (MCKINNIE) * column 2, line 31 - column 3, line 4; figures 1,2 *	1-4	
A	US-A-3 370 756 (MCKINNIE) * column 2, line 36 - column 3, line 15; figures 1-4 *	1,2,4	
A	US-A-3 217 938 (AYRES) * column 2, line 35 - column 3, line 8; figure 1 *	1,2,4,5	TECHNICAL FIELDS SEARCHED (Int. Cl.5) B65D A45D
A	US-A-3 291 346 (MARRAFFINO)		
A	US-A-3 341 079 (MARRAFFINO)		

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	25 JUNE 1992	ECCETTO M.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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